## **REMARKS**

## Claim Amendment

Claims 1, 4-6, 10, 12-15, 17-21, 26, 35 and 36 have been cancelled without prejudice to their presentation in a continuing application. Applicants do not abandon the inventions of the cancelled claims.

Claim 34 has been amended to correct typographical errors thus addressing the Examiner's objection.

New Claim 37 has now been presented. New Claim 37, is a parallel apparatus claim to the method Claim 34 and incorporates subject matter of original Claim 10 and previously presented Claim 26 as well as Claim 34 as amended.

Claims 2, 3, 7, 8, 22 and 24 have been amended to recast these claims as dependent on Claim 34.

Claim 3 has further been amended to more particularly point out the claimed invention and to introduce the proper antecedent basis. Support for this amendment is found in Claims 3 and 12 as originally filed.

Claim 7 has further been amended to recite that the subject genome sequence is a DNA sequence or subsequence or a protein sequence or subsequence. Support for this amendment is found throughout the specification and in Claims 6 and 15 as originally filed and Claims 19 and 20 as previously presented.

Claim 8 has further been amended to more particularly point out the claimed invention and to introduce the proper antecedent basis. Claim 8 as amended incorporates subject matter from Claim 1 as originally filed, from which original Claim 8 depended.

Claims 11 and 16 have been amended to recast these claims as dependent on new Claim 37.

Claim 16 has further been amended to recite that the subject genome sequence is a DNA sequence or subsequence or a protein sequence or subsequence. Support for this amendment is found throughout the specification and in Claims 6 and 15 as originally filed and Claims 19 and 20 as previously presented.

Claims 27 and 29 have been amended to recast these claims as dependent on new Claim 37.

This amendment introduces no new matter.

## Rejections Under 35 U.S.C. §101 and §112

The Examiner maintained rejections based on non-statutory subject matter and indefiniteness as set forth in the Office Action of April 26, 2004. Applicants refer to said Office Action and do not recapitulate the Examiner's arguments in the instant Amendment.

Based on the Office Action of November 19, 2004, it is Applicants understanding that Claim 34 as amended is allowable. As such, Claim 34 as amended is both directed to a statutory subject matter and is not indefinite.

Claims 2, 3, 7, 8, 22 and 24 as amended as well as Claims 9, 23 and 25, through their dependencies, depend on Claim 34. Applicants submit that if a base claim is directed to a statutory subject matter, so are the dependent claims. Accordingly, Applicants believe that the present amendment overcomes the rejection under 35 U.S.C. §101.

Furthermore, none of the Claims 2, 3, 7, 8, 9 and 22 - 25 as amended includes subject matter that recites "classification", "indexing" or "clustering". Applicants believe that Claims 2, 3, 7, 8, 9 and 22 - 25 as amended do not trigger the Examiner's rejection under 35 U.S.C. §112 and are allowable. Applicants note that they reserve the right to present the cancelled claims in a continuing application.

Similarly, new Claim 37 combines subject matter of Claims 10, 26 and 34 which have not been rejected under 35 U.S.C. §101. Applicants submit that new Claim 37 is directed to a statutory subject matter.

Applicants further submit that new Claim 37 is an "apparatus" counterpart of a "method" Claim 34. As such, new Claim 37 does not recite "classification", "indexing" or "clustering". Applicants believe that new Claim 37 does not trigger the Examiner's rejection under 35 U.S.C. §112 and is therefore allowable.

Similarly, Claims 11, 16, 27 and 29, dependent on new Claim 37, have not been rejected under 35 U.S.C. §101. Applicants further believe that these claims as amended do not trigger the Examiner's rejection under 35 U.S.C. §112. Applicants submit that Claims 11, 16, 27 and 29 are allowable.

Reconsideration and withdrawal of the §112 rejection is respectfully requested.

## **CONCLUSION**

In view of the above amendments and remarks, it is believed that all claims as now presented (Claims 2-3, 7-9, 11, 16, 22-25, 27-30, 34 and 37) are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

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